

### ABSTRACT

One of the impediments to the treatment of some human brain tumors (e.g. gliomas) has  
5 been the degree to which they expand, migrate widely, and infiltrate normal tissue. We  
demonstrate that a clone of multipotent neural progenitor stem cells, when implanted into  
an experimental glioma, will migrate along with and distribute themselves throughout the  
tumor in juxtaposition to widely expanding and aggressively advancing tumor cells,  
while continuing to express a foreign reporter gene. Furthermore, drawn somewhat by  
10 the degenerative environment created just beyond the infiltrating tumor edge, the neural  
progenitor cells migrate slightly beyond and surround the invading tumor border. When  
implanted at a distant sight from the tumor bed (e.g., into normal tissue, into the  
contralateral hemisphere, into the lateral ventricles) the donor neural progenitor/stem  
cells will migrate through normal tissue and specifically target the tumor cells. These  
results suggest the adjunctive use of neural progenitor/stem cells as a novel, effective  
15 delivery vehicle for helping to target therapeutic genes and vectors to invasive brain  
tumors that have been refractory to treatment.